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ABSTRACT

Topics and trends in literature providing a context for the present crisis in minority student retention are explored, noting a need for data-driven institutional research. Parts of a case study at a major public institution are presented. The study examined Black and Hispanic undergraduate student attrition at a White research institute to: identify the overall participation trends for four successive cohorts of Black, Hispanic, and White first-time full-time undergraduates; assess perceptions of persisting and nonpersisting Black and Hispanic undergraduates as to their satisfaction with institutional environment; develop race/gender profiles of such students; and test the applicability of the interaction theoretical framework for Black and Hispanic student participation and experiences. Findings include: incremental increases in Black and Hispanic enrollment have done little to improve overall participation; the pattern of high first-year nonpersistence reflects the national trend for nonpersisters irrespective of race/ethnicity; and without more active institutional efforts to achieve full academic and social integration of Blacks and Hispanics into the university the enrollment-nonpersistence cycle will continue. Fourteen recommendations include: establish a 2-year retention task force; fund, develop, and staff an academic support services center; and hire more Black and Hispanic academic advisors. Nine tables and five graphs are included. Contains 42 references. (SM)

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Data-Driven Retention Research: Using Institutional Research to Inform Institutional Practice

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Data-Driven Minority Retention Research: Using Institutional Research to Inform Institutional Practice

Empirical investigation and theory development of the college student attrition process dates back as far as the 1950's; (Iffert, 1957; Knapp & Goodrich, 1952; Little, 1959; Pace & Stern, 1958; Thompson, 1953). Despite nearly a forty-year research tradition, however, it is largely within the last ten to fifteen years that specific research attention has been focused on minority college students (Astin, 1982; Blackwell, 1981; Christoffel, 1986; Duran, 1983; Fleming, 1984; Lee, 1985; Minatoya & Sedlacek, 1983; Nettles, Theony & Gosman, 1986; Taylor, 1985; Thomas, 1981; Wilson & Melendez, 1986).

This paper explores several topics and trends found in participation literature which provide the national context for the present "crisis" in minority student retention and emphasizes the need and rational for data-driven institutional research. In addition, selected portions of a two-stage institutional case study conducted at a major public senior institution in the Southwest are presented. Research methods, major findings, implications and recommendations are summarized. Graphic and tabular data are included where appropriate.

Minority Student Participation

Studies consistently document the serious underrepresentation of non-Asian American minorities among college students in the United States, particularly at predominantly White institutions (Astin, 1982; Arbeiter, 1987; Brown, 1986; Darling-Hammond, 1985; Evangelauf, 1988; Lee, 1985). Based upon their current shares of the total population and the increasing number of minority high school graduates in the

traditional college-age (18-to-24 year-old) cohort, minority participation and degree attainment are declining significantly (Hill, 1983; Trent, 1985; Wilson and Melendez, 1986). Proportionally, Blacks and Hispanics are particularly hard hit (Evangelauf, 1988; Lee, 1985).

Data included in the American Council on Education's (ACE) 1986 Fifth Annual Status Report on Minorities in Higher Education (compiled by the Office of Minority Concerns) clarify the underrepresentation of minority students. According to population estimates for 1985, Whites represented 78.3 percent of the population while accounting for 80.3 percent of the total higher education enrollment. At the same time, minorities represented 21.3 percent of the population but accounted for only 17 percent of the total enrollment in higher education.

In fact, non-Asian American minority students are less likely than White students to advance and graduate at every educational level, thereby automatically reducing the pool of eligibles for higher education participation (Astin, 1982; Berryman, 1983; Brown, 1986). For those minorities who do seek undergraduate degrees, the barriers remain numerous and insidious, especially at predominantly White colleges and universities (PWCUs). Their minority status, institutional responses to their presence, adjustment problems, and performance demands combine to make persistence an ongoing challenge, for which there is no single, simple solution.

Thus, minority student attrition is multicausal, originating in financial, academic, social, psychological and institutional sources (Stikes, 1984). As such, many related stressors have been recognized as strong influences on minority students' decisions regarding several key choices in their collegiate experiences: institutional and major field

choice, enrollment, and subsequent persistence to graduation (Blackwell, 1981; Edmunds, 1984; Fleming, 1984; Wilson & Melendez, 1986).

For Blacks, one disturbing trend confounds the persistence situation. It has been noted extensively that there are striking differences between Black enrollment, persistence and graduation rates at historically Black colleges and universities (HBCUs) and PWCUs (Allen, 1987; Astin, 1982; Blackwell, 1981; Brazziel & Brazziel, 1980; Fleming, 1984; Gurin & Epps; 1975; Thomas, 1981). Despite the fact that most Black college students attend PWCUs, higher persistence rates (to graduation) for Blacks are recorded at HBCUs (Darling-Hammond, 1985; Wilson & Melendez, 1986). Given the seriousness and implications of this situation, both the ability and the willingness of PWCUs to make the necessary and appropriate responses to minority students' needs have been questioned. Stikes' (1984, p.20) contention that "White universities are failing Black students" derives from this continuing disproportionate lack of undergraduate degree attainment (Trent, 1985).

Hispanic (and, to a lesser degree, Black) persistence is greatly influenced by overrepresentation at two-year and vocational institutions (Astin, 1982; Duran, 1987; Evangelauf, 1988; Lee, 1985). According to a recent Department of Education study, in 1986, when only 35.3 percent of all students were enrolled at two-year public institutions, 43 percent of Blacks and 55 percent of Hispanics (compared with only 26 percent of Whites) attended such institutions (Evangelauf, 1988). The High School and Beyond two-year follow-up revealed that of those 1980 Hispanic high school seniors who were enrolled in colleges in 1982, 61 percent were attending two-year colleges (Lee, 1985). Melendez (1986, p.2) aptly described the Hispanic participation problem: "They remain highly

segregated at relatively few institutions and maintain the highest dropout rate of any ethnic group."

Thus, despite their heavier enrollment rates at two-year institutions, persistence there remains a problem for both Hispanics and Blacks. Astin (1982) reported average persistence rates as: Hispanics, 23.3 percent; Blacks, 24.4 percent; Whites, 29 percent. These findings highlight the "special significance for minorities" indicated by the negative relationship between enrolling at two-year public institutions and completing a bachelor's degree (Astin, 1982, p.99).

As noted, long after legal barriers to access have been removed, the problem of retaining minority students at PWCUs is particularly acute and complex. The dominant theme in retention research today -- the interaction theoretical framework -- has significant explanatory power in this situation. This perspective suggests that retention and attrition result from interactions that take place between particular student and institution. Those interactions are defined in terms of "fit" for the students who remain and "lack of fit" for those who leave (Lenning, Beal & Sauer, 1980).

Central to the theory are several related constructs: academic and social integration of the student into the university community, students' background characteristics, student's informal contact with faculty members, peer culture and intentions (Spady, 1970; Tinto, 1975; Pascarella, 1980; Taylor, 1985; Fleming, 1984; Stikes, 1984). Based upon these constructs, interaction models consistently portray attrition as longitudinal and multicausal, a dynamic interplay between individual student and institutional characteristics.

For example, students may vary in terms of race, gender, socioeconomic status, intellectual ability, interests and problems, goals, motivation and commitment. Likewise, institutions may vary by governance structure, type (two-year or four-year; public, or private or church-affiliated), history and mission, image, cost and selectivity, program offerings, and composition of students, faculty and staff. When these student and institutional characteristics are paired, infinite combinations are possible. The interactions that result directly influence students' decisions to persist or withdraw. Plausibly, such interactions may have directly influenced the cited "significant declines" in minority student participation.

Data-Driven Institutional Research

As evidenced by the amount of national and state attention given to the problem recently, it is clear that higher education governing bodies and institutions are becoming increasingly aware of, and concerned about, rising non-Asian American minority student attrition. In fact, given today's fiscal constraints and demographic projections for higher education, the very survival of some institutions may be greatly dependent upon the decision to leave college made by growing numbers of students (Hodgkinson, 1986). Additional incentive for involvement has come from federally-mandated desegregation plans. Not surprisingly, then, the situation has sparked renewed interest: (1) in student retention as a legitimate institutional endeavor which should be vigorously pursued and (2) in student attrition as educational decisions which (although made by individual students) are greatly influenced by many interelated student and institutional factors.

Consequently, many PWCUs are undertaking policy changes, program development and modification. Some institutions are basing their actions strictly on findings in the retention/attrition research literature, which provides national statistics and identifies student behavior models, causal and interactive factors, and generally appropriate institutional responses. Other institutions are electing to conduct their own action research in the form of data-driven self-studies.

Using this approach, problem identification, research findings and subsequent recommendations for policy or program change are institution-specific and, therefore, much more relevant (Goodrich, 1979). After the initial study, institutions may use the findings to establish a longitudinal trace for subsequent evaluation of retention success at the program and/or institutional level. Institution-specific research also provides an opportunity for campus-wide involvement of faculty and staff, an essential element in any meaningful attempt to increase minority student retention (Noel, 1976).

One additional advantage is that data collection and analysis may be achieved by using existing institutional records and personnel. Therefore, coordination across academic and administrative units becomes key to (1) establishing and maintaining accurate, comparable data and (2) adhering to timelines. Because the research is campus-based, however, it can be accomplished within the university's timetable (as dictated by need for information, availability of resources (human and financial) and other internal and external environmental constraints.

There are some limitations, however. For example, there is the possibility that institutional records may be incomplete in some areas. Fortunately, self-study provides an opportunity to discover and rectify missing segments in the data base. By definition, such studies also have limited generalizeability. Yet this loss in is often compensated for by important gains in institutional learning (Fox, 1985). If institutions are to design and implement effective intervention strategies for minority student retention, each institutional situation must be objectively assessed, with data derived from two key sources: (1) the institution and (2) its students (Clewell & Ficklen, 1986).

The foregoing literature review has important implications for higher education institutions. In conjunction with their increased research and policy interest in minority student attrition, colleges and universities must be mindful of considerable interaction variability across groups. That is, despite shared "minority group" status, racial/ethnic groups display distinctive patterns of enrollment, persistence and degree attainment.

Distinctive group participation patterns suggest the possibility of equally distinctive interactions between the various racial/ethnic minority groups and higher education institutions. Failing to acknowledge a need for adaptive, group-specific modifications to policies, programs or institutional orientations, many PWCUs have inappropriately expected the same basic behavior from all minority students. In such cases, inappropriate generic retention measures have been implemented.

Research has shown, however, that students and groups may differ markedly in their responses to the same institutional environment which

can influence persistence and educational outcomes (Allen, 1987, Blackwell, 1981; Duran, 1987; Fleming, 1982). In addition to a confining expectation for sameness among racial/ethnic groups, many institutions also hold an equally confining expectation for sameness of racial/ethnic minority students with White students in terms of academic and social behavior, use and need of services, duration, and pattern of matriculation (Stikes, 1984, Wilson & Malendez, 1984). Taylor (1985, p. 26) declares that "it is not surprising that retention problems are the rule rather than the exception.... The real problem is that minority students were expected to fit into white structures. White models were used to mold black student behavior."

Thus, the differences noted here suggest a need for colleges and universities (1) to acknowledge interaction variability among students and racial/ethnic groups and (2) to base their retention research, policies and programs on the specific needs, interests and problems of the constituent groups in their student population. Theory-based, institution-specific retention research permits institutions to enjoy the simultaneous benefits of demonstrably applicable theoretical perspectives, relevant institutional self-discovery, and informed policy intervention and institutional practice.

Institutional Research: A Case Study

This exploratory case study represented an attempt to examine Black and Hispanic undergraduate student attrition and experiences at one large, predominantly White, selective research institution in the Southwest. With significant proportions of both Black and Hispanic residents in the state, the university (historically only concerned with a largely same-race same-sex, same-age student population) has a vested

interest in accommodating the educational challenges and needs of its increasingly diverse student population. Its success in recruiting and retaining Black and Hispanic students will be affected directly by the quality of its interactions with current and prospective Black and Hispanic students, faculty and staff. With the interaction perspective as a theoretical base, this study may be viewed as an opportunity for the university to identify, examine and begin to solve some of the problems related to minority student attrition and retention within its own organizational context.

Two questions guided the research: (1) Using the existing student records data base, what can be learned about the Black, Hispanic and White undergraduate experience at the university for the past five years? and (2) When Black and Hispanic students are asked about their experiences, what do they tell us regarding their perceptions and satisfaction with the university's environment? The study, which covered the period from Fall 1982 to Spring 1987, had four specific objectives:

1. to identify, by race/ethnicity and gender, the overall participation trends for four successive cohorts of Black, Hispanic and White first-time full-time undergraduates;
2. to develop race-gender profiles--demographic, academic and involvement -- of Black, Hispanic and White persisting and nonpersisting undergraduates;
3. to assess the perceptions of persisting and nonpersisting Black and Hispanic undergraduates regarding their satisfaction with the institutional environment; and

4. to test the applicability of the interaction theoretical framework for Black and Hispanic student participation and experiences at this particular university.

Methodology

The study was conducted in two stages. Stage I involved the systematic compilation of participation trend data (enrollment, persistence, and degree attainment) and the development of persisting and nonpersisting student profiles. Subjects included four cohorts of Black, Hispanic and White first-time undergraduates identified in the fall semesters from 1982 to 1985. To ensure sufficient sample sizes, all (492) Black eligibles were included; one-half (623) of the Hispanic eligibles were randomly selected. For comparative purposes, a representative sample (1,160) of Whites was randomly selected. The total sample included 2,275 subjects (1,252 males, 1,023 females). Because group membership has empirically demonstrated potential to influence student-institution interactions, all cohorts were examined by race/ethnicity, gender and persistence status.

All data collected in Stage I were obtained from existing institutional records. As such, this stage required the cooperation of many integral academic departments and administrative offices. These included Admissions and Records, Student Financial Aid, the Computing Center and managers of the computerized student data base, the Student Counseling Services Center, the Multicultural Services Center and Measurement and Research Services.

Of the 16 variables (see Table 1), only 3 -- scholarship status, use of counseling services, and participation in campus organizations -- were not accessible by computer. These data were obtained from the

Minutes of the Scholarship Committee for 1982-85, the Student Counseling Services Center, and the survey questionnaire used in Stage II. To protect the confidentiality of individual students, the Counseling Center's clerical staff (not the researcher) reviewed the client files and provided summary data grouped by cohort, race/ethnicity, and gender. Appropriate descriptive statistics were used for data analysis.

Stage II involved the conduction of a telephone survey of students' satisfaction with the university environment. After the request for participation received a very low (13 percent) response rate from 128 randomly selected Black and Hispanic persisters and nonpersisters identified in Stage I, a smaller sample was randomly selected from the original survey sample. The smaller sample was chosen to permit more vigorous, sustained efforts by the researcher to locate and subsequently interview members of both groups, particularly nonpersisters. Approximately one-third (45) of the students were selected and contacted by mail and telephone. A second mail-out and numerous telephone follow-ups yielded a final response rate of 85 percent (or 38). The participants included 20 persisters -- 14 Blacks (11 females, 3 males) and 6 Hispanics (1 female, 5 males). The 18 nonpersisters included 10 Blacks (7 females, 3 males) and 8 Hispanics (5 females, 3 males).

A researcher-constructed questionnaire, the Environmental Evaluation, was designed (1) to permit categorization of persistence decision influences and (2) to quantify perceptions of the university's environment as (a) a factor for continued enrollment and (b) an indicator of student-institution "fit." Students' perceptions were obtained in five main areas: (1) academic; (2) financial; (3) social; (4) institutional; and (5) individual. Two forms of the questionnaire

were used, one with persisters and one with nonpersisters. The instrument consists of 48 Likert-type items with responses ranging from 1 (very dissatisfied) to 5 (very satisfied), 35 forced-choice items, and 19 open-ended items (see Table 2).

Telephone interviews lasting approximately 30 minutes were conducted for five weeks in the spring of 1988. The researcher and one trained assistant conducted all interviews. Due to the small number of respondents in each racial/ethnic and gender group, data are reported by persistence status only.

Final generalizations made about the Black and Hispanic undergraduate experience are based upon information from three sources: (1) participation trend data; (2) student profiles; and (3) survey responses. All sources are considered in assessing the consistency of the findings from this case study with those in interaction research literature.

Findings: Participation Trends

Enrollment. For the four enrollment periods examined, average freshman enrollment for Blacks (1.9 percent), Hispanics (4.9 percent) and Whites (81.1 percent) held relatively steady (see Figure 1), despite incremental gains for Blacks and Hispanics and losses for White. Racial/ethnic differences in enrollment trends were clearly evident. Blacks and Hispanics comprised a small but growing share of the freshman student population, reflecting increases of 1.5 percent for Blacks and 2.4 percent for Hispanics. By comparison, average White freshman enrollment increased by 17.0 percent. Gender differences were clearly present also. The male-dominant pattern held constant for all racial/ethnic (especially White) cohorts.

Persistence. Black and Hispanic persistence was almost equal at approximately 67 percent; White persistence was slightly higher at 73 percent. Unlike enrollment, female persistence (73 percent) was somewhat higher than male (67 percent) persistence for all racial/ethnic groups. There was also more gender disparity in persistence between Hispanics and Whites than between Blacks.

In terms of cumulative nonpersistence, the first academic year was by far the most critical period for all groups, particularly Hispanics. While almost 60 percent of the nonpersisters dropped out during their first year of study (see Figure 2), the average first-year nonpersistence rate across groups was 15 percent (see Figure 3). All groups had unique persistence patterns. For example, in addition to the first year (which applied to everyone), the critical attrition periods, by group, were: Blacks -- second, fourth and fifth years; Hispanics -- third year; Whites -- second, third and fifth years.

Degree Attainment. Considerable group differences were found in degree attainment. Based upon the combined number of eligibles per group (see Tables 3 and 4), the graduation rates were: Blacks, 12.4 percent (25 of 201); Hispanics, 28.8 percent (81 of 281); and Whites, 37.8 percent (214 of 566). Of the total 320 graduates, 8 percent were Black, 25 percent were Hispanic and 67 percent were White. Gender comparisons reveal higher overall degree attainment for females (38 percent) than males (25 percent). This held true for Blacks and Whites but not for Hispanics.

Findings: Student Profiles

Demographic: The demographic profiles of persisting and nonpersisting Black, Hispanic and White incoming freshmen revealed

differences of degree rather than type (see Table 5). Typically, they were 18-year-old in-state urban residents whose personal or family income was under $20,000. These students usually scored under 1,000 on the SAT yet graduated in the top quarter of their high school graduating class. The single most important demographic distinctions by race/ethnicity and gender were: Black females and males --high school class rank; Hispanic females -- SAT score; Hispanic males -- high school class rank; White females and males -- SAT score. Generally, age, income and hometown location made only minor contributions to the variation between persisters and nonpersisters.

Academic. The "typical" persister was quite possibly an academic scholarship recipient still enrolled at the end of Spring semester, 1987 with a grade point average of 2.5 (see Table 6). On the other hand, the "typical" nonpersister had withdrawn after the first academic year with a grade point average of 1.7. The nonpersister was almost twice more likely than a persister to have been an athletic scholarship recipient. The most striking academic similarity between persisters and nonpersisters of all racial/ethnic groups was academic college. A disproportionately high number of students in the sample, irrespective of group membership, were clustered in the same three colleges--Engineering, Liberal Arts and Business Administration.

For all three racial/ethnic groups, grade point average was the most important academic distinction between persisters and nonpersisters (see Figures 4 and 5). Across groups, Blacks had higher representation among athletic scholarship recipients while Hispanic athletic representation was minimal. Academic profiles were also distinguishable by gender. Compared with males, females had higher persistence and

degree attainment rates, lower grade point averages, higher representation among academic scholarship recipients and lower representation among athletic scholarship recipients.

Involvement. Generally, the involvement profiles were only moderately distinguishable by persistence status, race/ethnicity and gender (see Table 7). Compared with the nonpersister, the "typical" persister participated less frequently in financial aid programs, lived in the dormitory more often, used counseling services more often, and was more involved in campus organizations. While Black and (to a lesser degree) Hispanic involvement was more distinguishable than White involvement by persistence status, the most important involvement distinctions between persisters and nonpersisters by race/ethnicity were: Blacks -- participation in financial aid programs; Hispanics and Whites -- dormitory residence. Involvement in on-campus organizations for Blacks and Hispanics was heaviest in minority-sponsored organizations (see Table 8).

The chi square statistic and Cramer's measure of association revealed statistically significant associations at the .05 level between persistence and seven of the eight demographic, academic, and involvement variables tested. In confirmation of the academic profiles for each racial/ethnic groups, persistence was most strongly associated with grade point average (X^2 = 800.937, V = 0.59), followed by financial aid participation (X^2 = 110.534, V = 0.22). Of much lower but statistically significant association with persistence were high school class rank, dormitory residence, SAT score, race/ethnicity and gender. Only income level and persistence were found to be independent.

Findings: Student Satisfaction with Environment

Generally, more persisters than nonpersisters expressed satisfaction with the overall institutional environment (see Table 9). Considerable group difference were found across environmental components.

However, with two major differences -- persisters' general satisfaction with their academic experiences and nonpersister' perception of low teacher expectations -- students' perceptions of the academic environment were similar. Both persisters and nonpersisters were satisfied with their ability to perform academically without feeling personally restricted by their race/ethnicity, with the instructional techniques used (usually lectures), and with their study arrangements. Both groups also had overlapping dissatisfactions: the amount of time and interest given in class to Black and Hispanic contributions, issues and problems; high school preparation; a highly competitive classroom environment in which they felt "locked out;" and White professors whose behavior toward them seemed to be negatively affected by their race/ethnicity. Some nonpersisters reported that they "tried not to call attention to myself...rarely spoke voluntarily and tried to downplay my racial/ethnic difference."

Of the five components, financial assistance (e.g., ability to receive emergency funds quickly and manner in which assistance is offered) received the highest percentage of satisfactory ratings by nonpersisters. Generally, few persisters were satisfied in this area, particularly with the amount of information disseminated about all available financial aid, as opposed to information about "minority money" (funds targeted by the university for Black and Hispanics

students). Both groups felt strongly that they were systematically directed away from inquiry about, and application for, other financial aid opportunities that are generally available to White students at the university.

Persisters and nonpersisters in the survey were satisfied with the same social factors: participation in minority-sponsored organizations; general treatment in the local community; dating opportunities with persons in the same racial/ethnic group (Generally, dating opportunities with other-race partners did not seem to be a major concern for the participants interviewed.)

Social dissatisfactions were also in the same areas for both groups -- the level of awareness and acceptance of Black and Hispanic issues and problems; inadequate opportunities to participate in culturally relevant social and educational activities; inadequate institutional support for Black student activities; and the degree to which White students welcome and include Blacks and Hispanics into non-minority organizations on campus. For these reasons, almost all participants felt that there was a definite need for a central office for minority affairs.

The signal distinction was in perceived "fit" at the university. Persisters gave a somewhat mixed message. They, much more frequently than nonpersisters, reported feeling a sense of"belonging." That feeling was advanced with some trepidation, however. For example, when asked to choose a statement that best described their feelings, most persisters chose "I feel as if I am tolerated but not welcome, not a part of the university tradition." Nonpersisters especially felt a

social void. More frequently, they reported feeling alienated, isolated in and from the social environment at the university.

Three-fourths of the survey participants felt that racial/ethnic discrimination (although subtle) was present on campus; over half felt that they had been discriminated against by faculty, staff and other-race students. For example, one persisting Black female recalled a specific incident when her laboratory teaching assistant made her lead a song, a famous Black spiritual ("Swing Low, Sweet Chariot") as she picked seeds out of cotton during a lab session. A nonpersisting Black male described an incident in which, because of his physical appearance, he was advised to drop his academic major (Health Education) and "play football for us." Several incidents of racial slurs yelled from passing vehicles were reported, most often by persisting and nonpersisting Black females. One Hispanic male, who (along with two subsequently excused White table mates) was accused of cheating by his professor, reported being cursed, called a liar and threatened with expulsion. The young man described the situation: "He's trying to teach by intimidation...sort of a racist. He thinks that I'm intellectually inferior; that is the impression I get."

Items related to institutional services (other than financial aid) did not elicit very high percentages of either satisfaction or dissatisfaction. At least one-half of both groups responded with "I don't know," "not applicable," or simply refused to answer.

More persisters than nonpersisters were satisfied with their personal environments. Overwhelmingly, they had positive self concepts and were satisfied with their ability to make the kind of sacrifices and temporary adjustments which attending the university might require.

They were also very satisfied with their academic performance and with their decision to stay at the university, despite the fact that at some point most had considered leaving the university before graduating. As evidence of their positive attitude, most stated that they would recommend that other Black and Hispanic students also attend the university.

Few nonpersisters were satisfied with their opinions of themselves or with their ability to survive at the university. Most were dissatisfied with their academic performance and with their decision to leave the university. However, almost half said that they, too, would recommend that other students attend the university.

Despite their ultimately different persistence decisions, both persisters and nonpersisters gave the same reasons for initially coming to the university. In order of frequency they were: academic (to enroll in a specific program or because of the school's reputation); financial (availability of scholarships, grants and loans); and personal (career advancement and self-improvement). For persisters, the single most important reason given for staying was academic. For nonpersisters, the two most important reasons for leaving were academic and individual, with financial a close third.

Discussion and Conclusions

The findings from Stage I document discernible racial/ethnic and gender participation trends and student profiles. Group differences, of both practical and statistical significance, provide meaningful distinctions between persisters and nonpersisters on several characteristics. The findings in Stage II provide substantial qualitative support for the findings in Stage I. There is evidence to suggest that problematic persistence for Blacks and Hispanics may be

related to the institutional environment. The interactions and experiences of both groups seem to be characterized by a fundamental lack of both academic and social integration into the institutional environment.

Several conclusions may be drawn from this study. First, the observed trend of incremental increases in (total and freshman) Black and Hispanic enrollment have done little to improve the overall participation of these two groups. For example, persistence and graduation rates were virtually unaffected by the enrollment increases cited previously. In fact, enrollment gains were completely eroded by high nonpersistence rates. This suggests that institutional commitment and efforts to retain Black and Hispanic students to graduation have not been commensurate with state-mandated institutional efforts to recruit them.

Second, the cumulative pattern of high first-year nonpersistence reflects the national trend for nonpersisters, irrespective of racial/ethnic group membership. It is this trend which has prompted many institutions to engage in "front loading," providing concentrated support services during the first academic year (particularly during that first critical semester). For students who are experiencing academic, social adjustment, financial or personal problems, early warning and intervention seem to have a positive effect upon institutions' ability to retain them.

Unfortunately, many higher education educators and administrators benignly view high first-year nonpersistence as a rather natural "weeding out" process, as survival of the academic fittest. In fact, the process is often represented as good for both the student and the institution. Students who "couldn't survive" are released from the

vigorous intellectual challenges faced at the university and may be encouraged to pursue a perhaps less challenging course of study at some other institution. Likewise, the institution is released from its association (however brief) and its responsibility (however narrowly defined) to educate students whose high school preparation obviously left them underprepared for study at the university.

This passive school of thought fosters continued acceptance of high nonpersistence and neutralizes institutional concern and efforts to actively reduce attrition. As a consequence, long-term participation of Black and Hispanic students remains low. Such passivity also necessitates a continual effort by the institution to annually identify and recruit a new group of young Black and Hispanic students, with demonstrated high ability levels, into a fixed and unreceptive academic and social environment.

In response, many Black and Hispanic nonpersisters, who may have experienced academic problems in what for then was a hostile (or at least unsupportive) environment, adopted an academically destructive but self-protective response. As reported, many simply tried not call attention to themselves, rarely spoke voluntarily and tried to de-emphasize their racial/ethnic difference. Such a classroom environment negates the learning process, makes it impossible to adequately overcome deficiencies in high school preparation, makes it difficult to perform and impossible to compete, and helps to clarify the participation trends and academic profiles presented here.

Thus, the findings from this study allow one to make a third conclusion--that without more active institutional efforts to achieve full and effective academic and social integration of Blacks and Hispanics into the University community, the enrollment-nonpersistence

cycle will simply continue to repeat itself. At present levels, this represents a loss of one-third of the freshman students who are recruited. Given the size of the Black and Hispanic availability pool for higher education, so high a loss of predominantly in-state minority students has serious educational, social, and economic implications for the state and its educational institutions.

This study allows us to further conclude that the pre-college preparation of many Black and Hispanic students at state institutions has been differentially delivered and received. Thus, as a state institution, when this university actively recruits and admits students, it also assumes a basic state responsibility. That responsibility is to provide educational instruction and related services which promote the successful academic and social development of all students in an atmosphere that both recognizes and embraces diversity among its students, faculty and staff. It is a reciprocal challenge: the students face the challenges of learning, striving and adjusting to the institution; the university faces the challenges of teaching/supporting, striving and adjusting to its students. As such, retention efforts are integral parts of the university's efforts to fulfill its primary role, not budgetary and time demands of questionable institutional priority.

Previous mention was made of the generally similar demographic characteristics of persisters and nonpersisters. Of more importance were the academic and involvement differences between the two groups. In most instances, racial/ethnic and gender differences were also evident. These differences, documented by historical student data, support the conclusion that Black, Hispanic and White persisters and nonpersisters do, indeed, have different interactions with the institution and different experiences which may (1) color their

perceptions of the institutional environment, (2) influence decisions of personal "fit" or "belonging" which, in turn, (3) influence decisions about persistence. Observed academic and involvement differences, coupled with student self-reports, also support the conclusion that fairly large segments of the Black and Hispanic undergraduate population feel very isolated, both academically and socially. We may also safely conclude that such feelings of isolation help to produce the observed rates of Black and Hispanic nonpersistence.

Not surprisingly, persisters consistently demonstrated better academic performance and, by the indices examined here, were more involved in activities which require sustained interaction with university (financial aid, housing, and counseling) personnel. Persisters were also more involved in on-campus student organizations and more of them expressed satisfaction with the institutional environment. In short, Black, Hispanic and White students of very unequal numbers, with several shared demographic characteristics, came to the same university at the same time. Yet they seem to have had markedly different interactions in the academic and social environments, and markedly different educational outcomes.

Persistence rates were not vastly different--67 percent for Blacks and Hispanics, 73 percent for Whites. The focus, however, must be on the environmental interactions and the overarching educational objective of all college students--graduation. Here the groups' participation paths were greatly divergent. For example, graduation rates of two cohorts examined after five years were approximately 12 percent for Blacks, 29 percent for Hispanics and 38 percent for Whites.

The survey responses, taken from a small but randomly selected sample, provided important supplementary data which helped to document

the groups' varied interactions with the institution, personal experiences, intentions and persistence decisions. According to the interaction theoretical framework, academic and social intergration are central to persistence and retention. In addition, according to attrition literature on the educational experiences of minorities at PWCUs, academic and social integration are particularly problematic for these students. [3]Problems in all areas were more pronounced for nonpersisters than persisters. The researcher concludes, then, that the interaction theoretical framework, as applied to the Black and Hispanic students in this study, provides a valid and useful explanation for the findings in this study.

Recommendations

The lessons learned about what happens when many Black and Hispanic students enroll at the university argue for a disquieting lack of fit. The question becomes, what can be done? Obviously, background characteristics (such as pre-college preparation) are beyond the influence of the university. On the other hand, the academic and social climate on campus are of the university's own making. Hence, the university has the major role to play in changing its environment positively to one that is (1) more inclusive of all of its students and (2) actively supportive of their education-related endeavors on campus, irrespective of racial/ethnic group membership. The following recommendations are based upon the findings produced by this study and are specific to the particular interactions and experiences between Black and Hispanic students and this particular university:

1. Establish student retention as an appropriate and justifiable university priority, with financial support commensurate with the state institutional commitment.

2. Using an informed, data-driven approach, make student retention a campus-wide responsibility. In order to increase the awareness across campus, share research findings regarding problem areas.
3. Establish early warning and intervention systems in each academic department. Utilize both departmental faculty and other support service personnel in order to retain as many students as possible.
4. Invite representatives of each academic support service area to acquaint deans, department heads and faculty with the services available. This way, the persons with whom students have most direct academic interaction--the faculty--can develop a working knowledge of the academic services that are available (or not available) to their students.
5. Increase and monitor the number and quality of opportunities for student-faculty interaction. Provide incentives (similar to those given for research) to faculty who do a particularly good job of advising students.
6. Establish a two-year retention task force. Its responsibilities would be to (1) provide an in-depth assessment of the student attrition situation in each college, (2) explore special problem areas in the non-academic departments and services areas, (3) make recommendations for improvement, and (4) develop an integrated retention program, including an academic support services center. At the end of the two-year period, the task force should be disbanded and a newly established, standing Retention Program Committee should

assume its duties of monitoring and evaluating the university's and the program's ongoing progress in retaining students.

7. Fund, develop and staff an academic support services center. The center should be centrally located and open during regular business hours, as well as at nights and on weekends. This does not replace departmental advising and tutoring. It supplements those services and makes them available when the students are most likely to use and need them.

8. Hire more Black and Hispanic academic advisors. This would serve two purposes by: (1) helping the university to meet the state-mandated requirements for minority staff, and (2) increasing the possibility of reaching Black and Hispanic students who may be reluctant to seek help from persons often perceived as uncaring or hostile to their academic problems and concerns.

9. Rely more heavily upon high school class rank than SAT scores as admission and scholarship award criteria for Black and Hispanic students. SAT scores were an ineffective discriminator between Black and Hispanic persisters and nonpersisters.

10. Increase to five (5) years the length of time during which Black and Hispanic students may receive targeted scholarship funds. Research has shown that a five-year matriculation period is the norm, especially given the requirements in some academic majors.

11. Strongly and publicly denounce all racist/ethnocentric comments and discriminatory acts committed by university administrators, faculty, staff or students whenever and wherever they are made. Voicing intolerance for offensive acts will help to with hold permission for them and over time, will foster a healthier living and learning environment for all students.

12. Provide increased institutional support for social and educational activities that are more relevant to the Black and Hispanic cultures. This will help to foster a better sense of belonging and improved integration into the academic and social environments.

13. Begin to build, encourage and recognize traditions that proudly reflect the cultural diversity of today's student population. Such an institutional commitment and attitude will provide all students with wider access to the university community. This approach will routinely include persons who have been, and continue to be, routinely excluded.

14. Include student retention on the university's research agenda.

In terms of research design, the two-stage model employed in this study provided a very practical way of examining experiential data from two important sources--institutional records and students. Data collection was evolutionary in that findings and ideas developed in Stage I served as the basis for further exploration in Stage II. Data collection was much more difficult in the second stage than in the first. Whereas Stage I required cooperative departmental efforts to assemble several different kinds of student data, Stage II had logistical problems of a more personal, time-consuming nature.

As anticipated, locating and obtaining the participation of nonpersisters proved to be an especially involved process, often requiring many indirect personal traces (through students' relatives and friends) and many follow-ups after final location. Fortunately, the length of the Environmental Evaluation was not a problem; once students agreed to participate on the telephone, responses were generally forthcoming without complaint. Obtaining students (particularly Blacks) participation did, however, require extensive explanation of the purposes of the project (in addition to the written communications which they had been sent) and more personal identification of the caller(s). Establishing early empathetic rapport with survey participants seemed to generate more detailed discussion in response to the open-ended questions.

Persisters were more concerned than nonpersisters about protecting their identify but both groups were equally concerned about the purpose of the environmental survey. Blacks expressed more scepticism than Hispanics about its ultimate utility but all hoped that the findings would be used to improve present and future conditions at the university. For persons who conduct future surveys of nonpersisters, the researcher(s) and caller(s) should note the skepticism encountered here, the importance of good interpersonal skills, and the possibility of a lengthy location process.

In sum, the existing institutional records provided an extremely fertile field. Unquestionably, much remains to be explored. This study, however, was exploratory. The goal was to identify and describe what was found. With that in mind, the researcher was able to learn much about who comes to the university, why they come, some of what happens when they get there, how they perceive what happens, how long

they stay, and when and why some of them leave while others stay. For institutions which are seriously interested in increasing their rates of minority student retention, such as an introspective study yields a wealth of useful information. It provides an opportunity for informed policy and program intervention in an area with a demonstrated and growing impact upon the future of higher education.

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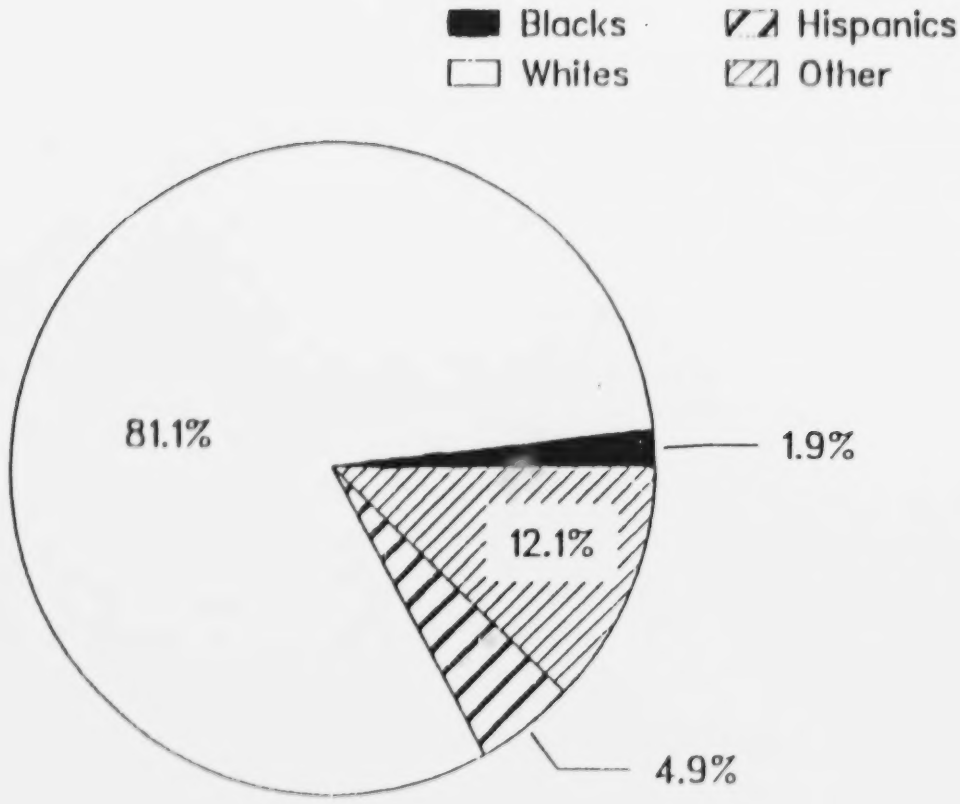
Table 1. Summary Typology of Variables

Demographic	Academic	Involvement
Ascriptive		
Race/Ethnicity	Persistence	Participation in financial aid programs
Gender	Grade Point Average:	Residence in dormitory
Age	Under 2.0	Use of counseling services
Economic	2.0-2.9	
Average adjusted gross income	3.0+	
Geographic	Academic college/major	Participation in campus organizations/activities
In-state residency	Scholarship status:	
Hometown size:	Academic (PAA)	
Rural (0-2,499)	Athletic	
Small town (2,500-9,999)		
Urban (10,000+)		
Pre-college Preparation		
Average SAT score:		
Under 1,000		
1,000-1,199		
1,200+		
Average high school class rank		

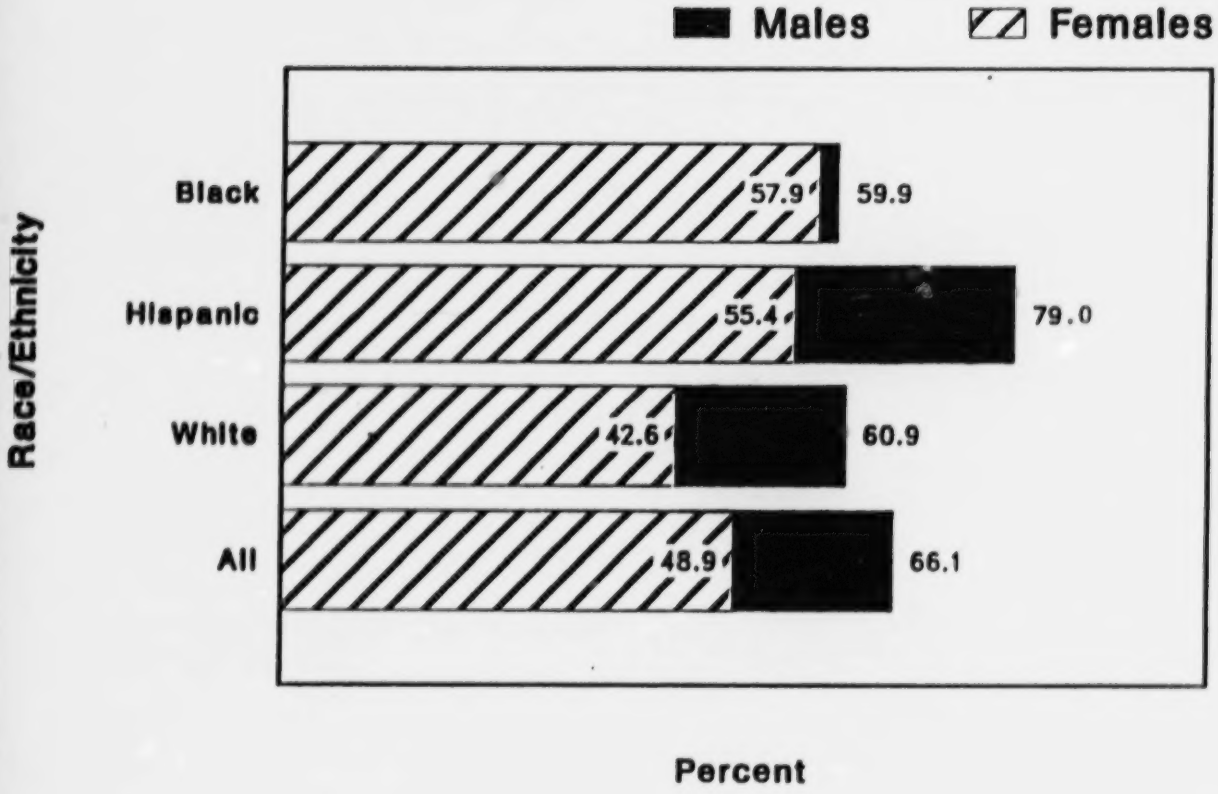
Table 2. Environmental Evaluation: Item Topics and Item Numbers

Item Topic	Item Number/Data Source
Reason(s) for coming to university	3
Reason(s) for staying at university	48a (P)
Reason(s) for leaving university	48a (NP)
General	1, 2, 16, 17, 38
Perceptions of environment:	
General	4, 51
Academic	5, 51, 6, 6a, 7, 7a-d, 8, 8a, 9, 10, 11 11a, 12, 13, 13a, 14, 14a-b, 15
Financial	18, 19, 39, 20, 20a, 21, 22, 23
Social	24, 25, 26, 26a-b, 26d, 28, 29, 33, 34, 35, 36, 36a, 37, 37a, 39
Institutional	40, 41, 41a, 42, 42a, 43, 44, 44a-b
"Fit" at university	27, 27a, 27c
Self-concept	45, 45a, 46, 47, 48
Participation in campus organizations	29a-c, 30, 30a-c, 31, 32
Aspirations	49, 50; Background Information Sheet
Critical incidents or experiences	26c, 27b, 45b, 51a
Educational/occupational attainment	Background Information Sheet
Respondent characteristics	Student records - Stage I; Background Information Sheet



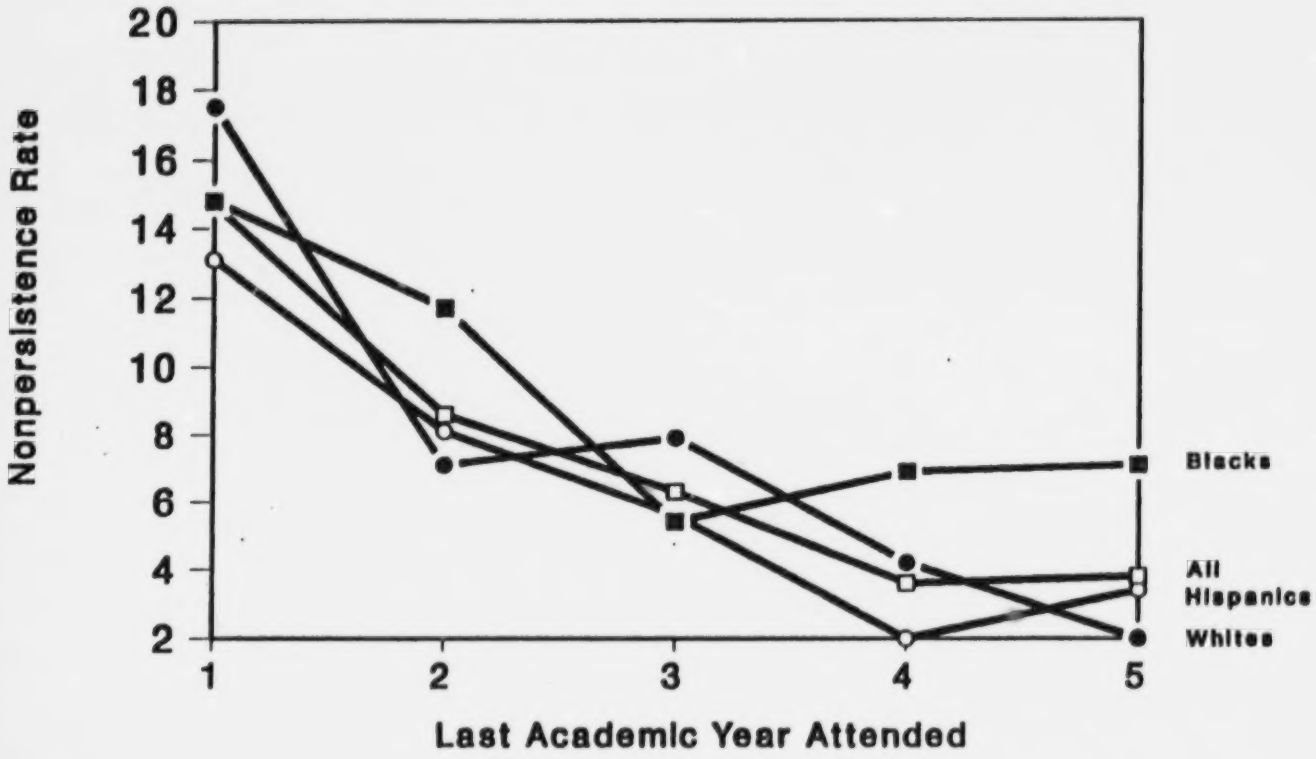
Sources: HEGIS Reports, Fall 1982 - 1985, and SIMS.

Figure 1. Total freshman enrollment by race/ethnicity: Fall 1982 - Fall 1985



Source: SIMS.

Figure 2. Cumulative first year nonpersistence by race/ethnicity, gender: Fall 1982 - Spring 1987.



Source: SIMS.

Figure 3. Average nonpersistence as measured by last year attended.

Table 3. Graduation Rates by Race/Ethnicity, Gender, Cohort and Academic Year

Cohort I (1982)	N	After 3 years (1984-85) #	%	After 4 years (1985-86) #	%	After 5 years (1986-87) #	%	Total #	%
Black	84			2	2.4	14	16.7	16	19.0
Females	41			1	2.4	10	24.4	11	26.8
Males	43			1	2.3	4	9.3	5	11.6
Hispanic	147			26	17.7	33	22.4	59	40.1
Females	50			11	22.0	7	14.0	18	36.0
Males	97			15	15.5	26	26.8	41	42.3
White	263	2	0.8	64	24.3	74	28.1	140	52.6
Females	135	2	1.5	43	31.9	35	25.9	80	59.3
Males	128			21	16.4	39	30.5	60	46.9
All	494*	2	0.40	92	18.6	121	24.5	215	43.5
Females	226	2	0.88	55	24.3	52	23.01	109	23.3
Males	268			37	13.8	69	25.75	106	39.5

Note: The total does not reflect missing graduation status for three of (229) White females in Cohort I.

Source: SIMS.

Table 4. Graduation Rates by Race/Ethnicity, Gender, Cohort and Academic Year

Cohort II (1983)	N	After 3 Years (1985-86) #	%	After 4 Years (1986-87) #	%	Total #	%
Black	117			9	7.7	9	7.7
Females	53			4	7.5	4	7.5
Males	64			5	7.8	5	7.8
Hispanic	134	3	2.2	19	14.2	22	16.4
Females	53	1	1.9	15	28.3	16	30.2
Males	81	2	2.5	4	4.9	6	7.4
White	303	2	0.7	72	23.8	74	24.4
Females	129	2	1.6	43	33.3	45	34.9
Males	174			29	16.7	29	16.7
All	554	5	0.9	100	18.0	105	18.9
Females	235	3	1.3	62	26.4	65	27.7
Males	319	2	0.6	38	11.9	40	12.5

Source: SIMS.

Table 5. Demographic Profile of Persisters and Nonpersisters by Race/Ethnicity

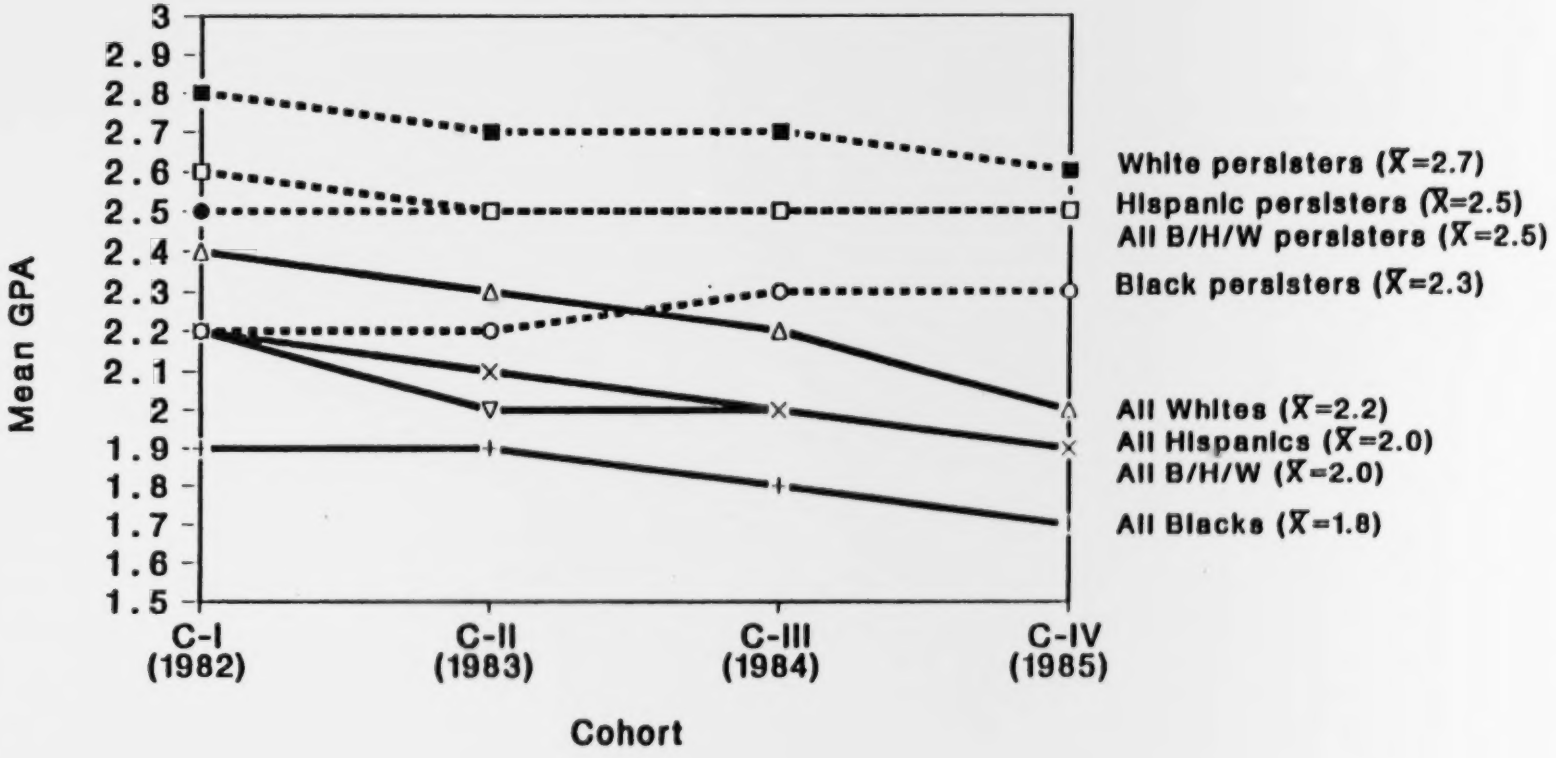
Demographic Characteristic	Blacks		Hispanics		Whites		Total	
	P (N=327)	NP (N=165)	P (N=417)	NP (N=206)	P (N=846)	NP (N=314)	P (N=1590)	NP (N=685)
18 years old	72%	60%	68%	77%	68%	60%	69%	65%
Income under $20,000	74%	77%	70%	71%	80%	89%	7?%	77%
In-state resident	88%	90%	95%	95%	95%	95%	90%	95%
Urban hometown	89%	87%	85%	85%	80%	79%	85%	83%
SAT score under 1000	78%	87%	66%	74%	47%	57%	63%	73%
Top 25%, high school graduating class	80%	61%	85%	76%	82%	71%	82%	69%

Source: Extracted from Appendix C, Tables 1-2.

Table 6. Academic Profile of Persisters and Nonpersisters

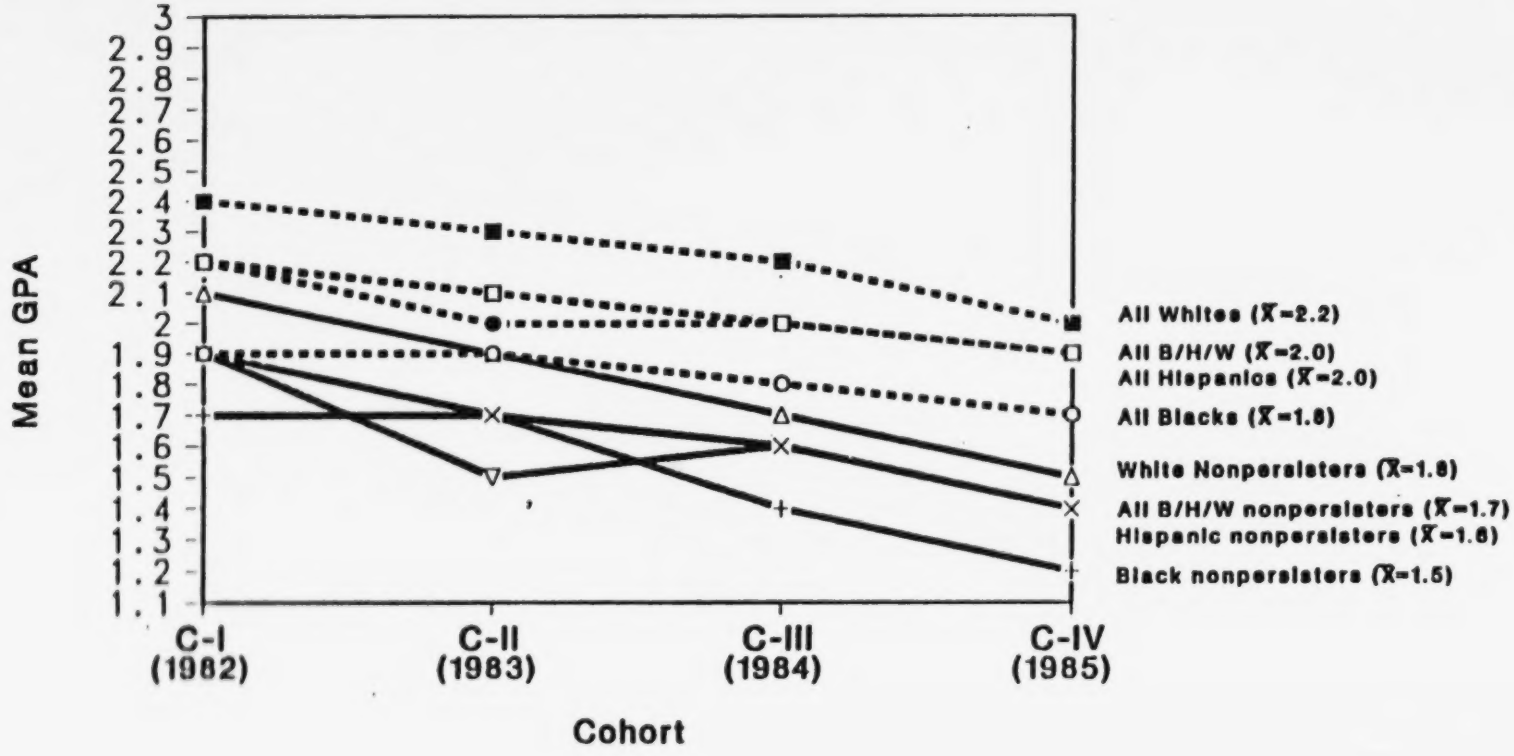
Persister (N=1590)	Nonpersister (N=685)
81% persisted to Spring, 1987 27% persisted to graduation by Spring, 1987	59% withdrew after first academic year
GPA of 2.5	GPA of 1.7
Majored in Engineering (35%) or Liberal Arts (25%) or Business Administration (22%)	Majored in Liberal Arts (38%) or Engineering (32%) or Business Administration (31%)
41% received President's Achievement Award	24% received President's Achievement Award
6% received athletic scholarship	11% received athletic scholarship

Source: Extracted from Appendix E, Tables 1-2.



Source: SIMS.

Figure 4. Mean grade point average for persisters relative to total racial/ethnic group.



Source: SIMS.

Figure 5. Mean grade point average for nonpersisters relative to racial/ethnic group and total population.

Table 7. Involvement Profiles, by Race/Ethnicity and Persistence

Involvement Variable	Blacks		Hispanics		Whites	
	Persister (N=327)	Nonpersister (N=165)	Persister (N=417)	Nonpersister (N=206)	Persister (N=846)	Nonpersister (N=314)
Participation in student financial aid programs:						
Total	28%	19%	30%	37%	10%	13%
Pell	13%	5%	12%	10%	3%	2%
GSL	4%	1%	3%	1%	2%	0
CW-S	2%	1%	3%	2%	2%	1%
Dormitory residence	72%	59%	67%	46%	57%	48%
Use of counseling service	20%	11%	15%	8%	15%	11%

Source: Extracted from Appendix E, Tables 1 and 2.

Table 8. Participation in On-Campus Organizations

Organization	Persister Participation Reported		Nonpersister Participation Reported	
	Member	Officer	Member	Officer
Club	1			
League of Engineers	1			
Toasters	1			
Agriculture Honor Society	1			
Agriculture Economic Club	1			
Alpha Kappa Alpha Soroity	3	2		
Alpha Lambda Delta	2			
Alpha Phi Alpha Fraternity	2			
American Society of Civil Engineers	1			
American Society of Marine Biology (MBIO)				
American Society for Mechanical Engeineers	1			
American Society for Metals	1			
Black Awareness Committee (BAC)	5	2	4	1
Beta Sigma Gamma	1			
Class of '88 Council	1			
Collegiate Future Farmers of America	1	1		
Committee for Awareness of Mexican-American Culture	2			
Delta Sigma Theta	1	1		
Dormitory Council	1	1	1	
Great Commission Students (Christian Student Council for Exceptional Children)	2			
I Care	2		4	
Marketing Society	1			
MSC Hospitality	1			
MSC Student Development	1	1		
National Society of Black Engineers	1	1	3	
Nutrition Club	1			

Table 3. (cont'd)

Organization	Persister Participation Reported		Nonpersister Participation Reported	
	Member	Officer	Member	Officer
Orientation Leaders	1			
Peer Counseling	1			
Phi Eta Sigma	3			
Pi Epsilon	1			
Residence Hall Association		1		
Retailing Society	1			
Sociology Club	1			
Student Conferences on National Affairs	1			
Student Government	2	1		
Tau Kappa	2	1		
Tri Beta (MBIO Honor Society)				
Voices of Praise	4	2	3	1
Total	53	14	15	2

Source: Environmental Evaluation.

Table 9. Average Satisfaction with Institutional Environment

Environmental Component	Persisters (N=20)		Nonpersisters (N=18)	
	% Satisfied	% Dissatisfied	% Satisfied	% Dissatisfied
Academic	47.8	32.8	38.9	58.2
Financial	35.0	38.0	46.7	38.6
Social	32.1	34.6	35.3	46.0
Institutional services	38.0	20.0	37.8	30.0
Personal	86.2	8.3	40.2	37.5
Mean	47.8	26.7	39.8	42.0

Note: Percentages represent group means of categorical responses to individual items under each environmental component (see Appendix F, Tables 1-5).

Source: Environment Evaluation.